

610-337-5269 alt. Mike Richards

NRC FORM 313 (10-2005) 10 CFR 30, 37, 33, 34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 10/31/2008

APPLICATION FOR MATERIAL LICENSE

Estimated burden per response to comply with this mandatory collection request: 4.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555 0001, or by Internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

IF YOU ARE LOCATED IN:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION III 2443 WARRENVILLE ROAD, SUITE 210 LISLE, IL 60532-4352

NAS63

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM DIVISION OF NUCLEAR MATERIALS SAFETY U.S. NUCLEAR REGULATORY COMMISSION, REGION I 475 ALLENDALE ROAD KING OF PRUSSIA, PA 19406-1415

NUCLEAR MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION IV 611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TX 76011-4005

03034488

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- A. NEW LICENSE
B. AMENDMENT TO LICENSE NUMBER
C. RENEWAL OF LICENSE NUMBER

37-30399-01

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

American Geotech, Inc
1801 Penn Ave
Wyomissing, PA 19609

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Same as No. 2
Job
Temporary sites

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

KIN CHUNG

TELEPHONE NUMBER

610-670-9055

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

Attached

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

Attached

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE

Attached

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

Attached

9. FACILITIES AND EQUIPMENT

Attached

10. RADIATION SAFETY PROGRAM.

Attached

11. WASTE MANAGEMENT.

Attached

12. LICENSE FEES (See 10 CFR 170 and Section 170.31)

TEE CATEGORY AMOUNT ENCLOSED \$

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 (52 STAT. 749) MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

SIGNATURE

DATE

Kin Chung

Kin Chung, President

Kin Chung

5/1/07

FOR NRC USE ONLY

TYPE OF FEE FEE LOG FEE CATEGORY AMOUNT RECEIVED CHECK NUMBER COMMENTS

APPROVED BY

DATE

140731

ITEMS 5 AND 6: MATERIALS TO BE POSSESSED AND PROPOSED USES

Yes	No	Radioisotope	Manufacturer or Distributor Model No.	Quantity	Use As Listed on SSD Certificate	Specify Other Uses Not Listed on SSD Certificate
✓		Cesium-137	<p>Sealed source manufacturer or distributor and model number:</p> <hr/> <p>Device manufacturer or distributor and model number: <i>Troxler 3430</i> <i>Humboldt 5001c</i> <i>Troxler 3411-B</i></p> <p><i>See Attached</i></p>	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	<p>Yes <input checked="" type="checkbox"/></p> <p>Specific description of the gauge use: <i>Field Density Tests</i></p>	<p><input checked="" type="checkbox"/> Not applicable</p> <p><input type="checkbox"/> Uses are:</p> <p>(Submit safety analysis supporting safe use)</p>
✓		Americium-241	<p>Sealed source manufacturer or distributor and model number:</p> <hr/> <p>Device manufacturer or distributor and model number: <i>Troxler 3430</i> <i>Humboldt 5001c</i> <i>3 Troxler 3411-B</i> <i>See Attached</i></p>	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	<p>Yes <input checked="" type="checkbox"/></p> <p>Specific description of the gauge use: <i>Field density Test</i></p>	<p><input checked="" type="checkbox"/> Not applicable</p> <p><input type="checkbox"/> Uses are:</p> <p>(Submit safety analysis supporting safe use)</p>

APPENDIX B

Yes	No	Radionuclide	Manufacturer or Distributor Model No.	Quantity	Use As Listed on SSD Certificate	Specify Other Uses Not Listed on SSD Certificate
	✓	Californium-252	Sealed source manufacturer or distributor and model number: <hr/> Device manufacturer or distributor and model number: <hr/>	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input type="checkbox"/> Specific description of the gauge use: <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> Not applicable <hr/> <input type="checkbox"/> Uses are: <hr/> (Submit safety analysis supporting safe use)
	✓	Other Isotope (Specify):	Sealed source manufacturer or distributor and model number: <hr/> Device manufacturer or distributor and model number: <hr/>	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input type="checkbox"/> Specific description of the gauge use: <hr/>	<input type="checkbox"/> Not applicable <hr/> <input type="checkbox"/> Uses are: <hr/> (Submit safety analysis supporting safe use)
✓ <i>Financial Assurance Required and Evidence of Financial Assurance Provided</i>						

ITEMS 7 THROUGH 11: TRAINING AND EXPERIENCE, FACILITIES AND EQUIPMENT, RADIATION SAFETY PROGRAM, AND WASTE DISPOSAL

Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
<p>7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE - RADIATION SAFETY OFFICER</p> <p>Name: <i>Kin Chung</i></p>	<p>Before obtaining licensed materials, the proposed RSO will have successfully completed one of the training courses described in Criteria in the section entitled "Individual(s) Responsible for Radiation Safety Program and Their Training and Experience - Radiation Safety Officer" in NUREG-1556, Vol. I, Rev. 1, dated November 2001.</p> <p><i>29 CFR 190.1200 General site worker/supervisor 8-hour Hazwoper refresher course</i></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS</p>	<p>Before using licensed materials, authorized users will have successfully completed one of the training course described in Criteria in the section entitled "Training for Individuals Working In or Frequenting Restricted Areas" in NUREG-1556, Vol. 1, Rev 1, dated November 2001.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>9. FACILITIES AND EQUIPMENT</p>	<p>No information needs to be submitted in response to this item; key issues are addressed under "Radiation Safety Program - Public Dose" and "Radiation Safety Program - Operating and Emergency Procedures."</p>		<p>Separate Item 9 Response Need Not Be Submitted With Application</p>
<p>10. RADIATION SAFETY PROGRAM - AUDIT PROGRAM</p>	<p>The applicant is <i>not</i> required to, and should not, submit its audit program to NRC for review during the licensing phase.</p>		<p>Need Not Be Submitted With Application</p>
<p>10. RADIATION SAFETY PROGRAM - TERMINATION OF ACTIVITIES</p>	<p>The applicant is <i>not</i> required to submit a response to the termination of activities section during the initial application. However, when the license expires when the licensee ceases operations, NRC Form 314 must be submitted.</p>		<p>Need Not Be Submitted With Application</p>
<p>10. RADIATION SAFETY PROGRAM - SURVEY INSTRUMENTS</p>	<p>We will either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in the section entitled "Radiation Safety Program - Instruments" in NUREG-1556, Vol I, Rev. I, dated November 2001.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

APPENDIX B

Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
10. RADIATION SAFETY PROGRAM - MATERIAL RECEIPT AND ACCOUNTABILITY	Physical inventories will be conducted at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. RADIATION SAFETY PROGRAM - OCCUPATIONAL DOSIMETRY	Either we will maintain, for inspection by NRC, documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of 10 percent of the allowable limits in 10 CFR Part 20, or we will provide dosimetry processed and evaluated by an NVLAP-approved processor that is exchanged at a frequency recommended by the processor.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. RADIATION SAFETY PROGRAM - PUBLIC DOSE	The applicant is <i>not</i> required to submit a response to the public dose section during the licensing phase. This matter will be examined during an inspection.		Need Not Be Submitted With Application
10. RADIATION SAFETY PROGRAM - OPERATING AND EMERGENCY PROCEDURES	We will implement and maintain the operating and emergency procedures in Appendix H of NUREG-1556, Vol. 1, Rev. 1, dated November 2001, and provide copies of these procedures to all gauge users and at each job site. OR Operating and emergency procedures will be developed, implemented, and maintained and will meet the criteria in the section entitled "Radiation Safety Program - Operating and Emergency Procedures" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. RADIATION SAFETY PROGRAM - LEAK TEST	Leak tests will be performed at intervals approved by NRC or an Agreement State and specified in the Sealed Source and Device Registration Sheet. Leak tests will be performed by an organization authorized by NRC or an Agreement State to provide leak testing services for other licensees or using a leak test kit supplied by an organization authorized by NRC or an Agreement State to provide leak test kits to other licensees and according to the kit supplier's instructions.	<input checked="" type="checkbox"/>	The information in Appendix J supporting a request to perform leak testing and sample analysis is attached.

Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
<p>10. RADIATION SAFETY PROGRAM - MAINTENANCE</p>	<p><i>Routine Cleaning and Lubrication</i> We will implement and maintain procedures for routine maintenance of our gages according to each manufacturer's recommendations and instructions.</p> <p><i>Non-Routine Maintenance</i> We will send the gage to the manufacturer or other person authorized by NRC or an Agreement State to perform non-routine maintenance or repair operations that require the removal of the source or source rod from the gage.</p>	<p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p>The information listed in Appendix G supporting a request to perform non-routine maintenance in-house is attached.</p>
<p>10. RADIATION SAFETY PROGRAM - TRANSPORTATION</p>	<p>The applicant is <i>not</i> required to submit its response to transportation during the licensing process. However, this issue will be reviewed during inspection.</p>		<p>Need Not Be Submitted With Application</p>
<p>11. WASTE MANAGEMENT - GAUGE DISPOSAL AND TRANSFER</p>	<p>The applicant is <i>not</i> required to submit a response to waste management during the licensing process. However, the licensee should develop, implement, and maintain gage transfer and disposal procedures in its radiation protection program.</p>		<p>Need Not Be Submitted With Application</p>

**REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE
(AMENDED PAGE 1)**

NO.: NC-646-D-130-S

DATE* December 28, 2001

PAGE: 1 of 16

DEVICE TYPE: Portable, Surface Moisture and Density Gauge

MODEL No.: 3400 Series: Models 3430, 3430-M, 3440, 3440-M

Troxler 3430

MANUFACTURER/DISTRIBUTOR: Troxler Electronic Laboratories
3008 Cornwallis Road
P.O. Box 12057
Research Triangle Park, NC 27709
(919) 549-8661

<u>SEALED SOURCE MODEL DESIGNATION:</u>	<u>ISOTOPE:</u>	<u>MAXIMUM ACTIVITY:</u>
AEA Technology/QSA, Inc. Model No. CDCW556 Capsule Type XN.30 Special Form Certificate No. GB/140/S	Cs-137	9 millicuries (333 MBq)
Model No. CDCW556 Capsule Type X1218 Special Form Certificate No. GB/353/S-85	Cs-137	9 millicuries (333 MBq)
Model AMNV.997 Capsule Type X.1 Special Form Certificate No. GB/7/S-85	Am-241 : Be	44 millicuries (1.63 GBq)
<u>Isotope Product Laboratories</u> Model No. HEG-137 Capsule Type 3024 Special Form Certificate No. USA/356/S	Cs-137	9 millicuries (333 MBq)
Model HEG-252 Capsule Type 3024 Special Form Certificate No. USA/356/S	Cf-252	66 microcuries (2.44 MBq)
Model Nos. 3021 or 3027 Special Form Certificate No. USA/0462/S	Am-241 :Be	44 millicuries (1.63 GBq)
Model # Aml.NO2 Special Form Certificate # CZ/1009/S-85	Am-241:Be	44 millicuries (1.63 GBq)

LEAK TEST _____ 6 months

PRINCIPAL USE: (G) Portable Moisture Density Gauge

CUSTOM DEVICE: _____ YES _____ X NO

OCT-25-2002 11:42

USNRC 1 KOP FR

610 337 5269 P.02/14

Reed

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REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE

NO: NC356D101S

DATE: February, 1986
Revised: November, 1988

PAGE 1 of 9

DEVICE TYPE: Moisture/Density Gage

MODEL: 5001

Humboldt 5001c

MANUFACTURER/DISTRIBUTOR: HUMBOLDT SCIENTIFIC, INC
553E Pylon Drive
Raleigh, NC 27607

SEALED SOURCE MODEL DESIGNATION: Cs-137 HSI Dwg. 2200064
Am-241:Be HSI Dwg. 2200067

ISOTOPE: cesium-137 MAXIMUM ACTIVITY: 11 millicuries
americium-241:beryllium 44 millicuries

LEAK TEST FREQUENCY: 6 Months

PRINCIPAL USE: Measure the moisture and density of various construction materials.

CUSTOM DEVICE: YES X NO

Humboldt
500/C

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE

No: NC356D101S

DATE: February, 1986

PAGE 2 of 9

Revised: November, 1988

DEVICE TYPE: Moisture/Density Gage

Humboldt Scientific, Inc. obtains sources from more than one manufacturer and gives them an HSI drawing number. The sealed sources utilized are as follows:

<u>SEALED SOURCE DESIGNATION</u>	<u>ISOTOPE and ACTIVITY</u>
HSI Drawing 2200064	Cesium-137
ANSI/ISO Class C66545	10 ± 10% mCi
USNRC Model CDC 805	
Special Form GB/24/S	

AND

HSI Drawing 2200067	americium-241:beryllium	um
ANSI/ISO Class C64544	40 ± 10% mCi	
USNRC Model AMN V997	9 X 10 ⁴ n/s	
Special Form GB/7/S		

CONDITIONS OF NORMAL USE

The 5001 is intended to be used to measure the density and moisture content of various construction materials such as soil, rock, asphaltic concrete and cement concrete for the purpose of compaction control during the construction of highways, bridges and building foundations. It may have additional use for the same measurements as a means of testing for water intrusion into dams and roofing systems or the inventory control of coal stock piles.

The same sources, shielding and containment system are incorporated into all models. The letter and numeric suffix designate the type of electronics incorporated and the length and increments of the expendable source rod containing the Cs-137 material.

The unit is designed for environmental conditions of:

Operating Temperature	-10 to 70°C
Storage Temperature	-55 to 85 °C
Humidity	98% without condensation
Vibration	2.5 mm at 12.5 Hz
Shock	100 g
Pressure	Atmospheric to 15000 m

The design life of the device and sources is 15 years.

3/10/04 Bought
PAGE 01
PAGE 03



Troxler Electronic Laboratories, Inc.
3008 Cornwallis Rd., P.O. Box 12057
Research Triangle Park, NC 27709
Tel: (919) 549-8661 Fax: (919) 485-2260
License: NC 032-0182-1

Model 3411-B

From Phil

LEAK TEST CERTIFICATE

DEVICE:

Model: 3411

Serial No: 13037

Sample Date: 3/8/04

SEALED SOURCES:

SERIAL NO.	MEASURE DATE	NUCLIDE	ACTIVITY (Bq)	(mCi)
50-1414	9/18/85	CS-137	0.296	8
47-8347	8/25/85	AM-241 BE	1.48	40

CS-137
AM-241 BE

LEAK TEST ANALYSIS:

Sample measured on: 3/8/04 at 1:16:37 PM

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.31E+01	2.11E+01
Background measurement (cpm)	0	26
Sample measurement (cpm)	1	25
Activity (Bq)	< MDA	< MCA
Min. Detectable Activity (Bq)	2.1E-01	1.3E+00

This certifies that the above leak test results are:

Less than 185 Bq (0.005 uCi) Greater than 185 Bq (0.005 uCi)

Certified by: Harry Pendleton

If greater than 185 Bq (0.005 uCi):

Person Notified _____ Date _____

Phone _____ and/or Fax _____

This is to acknowledge the receipt of your letter/application dated 5/1/2007 ^(RECEIVED) (6/23/2007), and to inform you that the initial processing which includes an administrative review has been performed.

Received 37-30398-01 There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 140731.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.